Mineral Wealth of India

by

S. K. RAY CHAUDHURI,
M.I.M.A., F.G.M.S., M.I.S.E.,
Mining, Mechanical and Electrical Engineers,
First Class, Colliery Manager,
Vice-President, India Society of Engineers.

"GOPAL BAGH"
Avanashi Road COIMBATORE

Mineral Wealth of India

by
S. K. RAY CHAUDHURI,
M.I.M.A., F.G.M.S., M.I.S.E.,
Mining, Mechanical and Electrical Engineers,
First Class, Colliery Manager,
Vice-President, India Society of Engineers.

Very few in India knows the vast mineral wealth that India possesses. Our ignorance in this respect is not only colossal but criminal. Not only the Britishers and Americans but even the Germans and the Japanese know more about our mineral wealth than what any of our most well-informed experts know or have ever cared to know. If the history of the early developments of Mining Industries in India is ever written in all its details the pioneer Germans who risked their lives and entered the darkest jungles and the most inaccessible heights of India will have their due share of praise.

My first experiences in Mining was in a small state known as Choto Udaipur State bordering Baroda State – where I was employed as Assistant Mining Engineer-in-Charge in a Manganese Mine in the famous years of 1920–21. This Mine named Pani Manganese Mines was situated 40 miles from the nearest Railway Station in dense jungle. It was discovered by a German Company – whose modus operandi of discovery of valuable minerals was to pay the ignorant and simple people of the locality

some Baksis for each piece of heavy stone. Perhaps out of one thousand such pieces they could get one really valuable ore and that way they discovered many valuable mines including the one in which I first started my life. Many of the valuable lead, copper, and iron mines were discovered in a similar way.

Yet we all know that India knew of the process of extraction and uses of almost every kind of metals and their various alloys long before American continent was known and the Europeans were even half civilised. India smelted iron and got even stainless steel. There is the Asoka Pillar which have stood the test of centuries of corroding and destructive actions of weather and time. There are several cannons in Bishnupur a town in Bengal which are made of stainless cast steel. Without blast furnaces our forefathers in India manufactured Iron and Steel. They also extracted gold and silver and mercury and manufactured various alloys and various kinds of life giving medicines from metals. So the mining operations in India is as old as humanity and civilisation. Yet by a curious irony of fate to-day India is most backward in the exploitation of its vast and limitless mineral wealth for the benefit of her own sons.

The reason is not far to seek. Hindu sciences and Hindu Philosophy received a severe set back when it ceased to be progressive and wanted to rest on its past achievements. In the field of science it manufactured one of the most astounding of medicine like 'Makaradhaj' a miracle of chemical

and pharmaceutical products. But suddenly it stopped there. Had she followed its chemical and medicinal researches further up it could have ensured heavenly life for human beings and what is more it could have conquered disease and death and made man immortal.

But all of a sudden it ceased to be dynamic with the results that foreigners after foreigners came and conquered India and dimmed the fire which would light the world.

The British regime which have just ended, has, no doubt, given India a great impetus in the all-round progress of mining and other industries and the development of mineral wealth on some scientific and methodical lines. But since they were all done naturally in a spirit of pure exploitation of the mineral wealth for their own benefit the result has been far from satisfactory. On the otherhand it has been disastrous in many respects in so far as the interest of this country is concerned. As for example in the coal industry, the Jharia Coal field, which is perhaps the biggest and best coal field in world both as regards quantity and quality of coal and their easy availability are concerned, has been worked in such a haphazard, unmethodical and unscientific way that its effective life has been reduced by about one hundred years and incalculable amount of priceless metallurgical coal has either been irrecoverable in the mines or burnt away in a wasteful and useless manner. Many a unbiassed and eminent Mining Engineers and Geologists both European and Indian have protested against this

reckless waste and destruction of national wealth of immense potentiality; but the foreign industrialists – who wanted to make hay while the sun of British Imperialism shone and with which most unfortunately our own countrymen made common cause – paid little heed to such warnings – with the result that India may be threatened with a shortage of metallurgical coal to such an extent as may eliminate the possibilities of starting any further steel manufacturing plants. Not only that even a propaganda has been started in England and America that India should not start Iron and Steel manufacturing factory as she has not the requisite amount of metallurgical coal. That is a mere canard. In my humble opinion even in the Jharia coal field we have yet such a reserve of metallurgical coal as will if preserved from now and with immediate effect, serve the country's need for another 100 years. And if a dilligent Geological survey work is carried out we are sure to strike new deposits of coal both metallurgical and otherwise which will last and serve India's needs for centuries to come. This will need vision and constructive and creative idealism and I am sure the National Government will take up the matter in right earnest and give a fillip and impetus to this No. 1 basic industry viz. the coal mining industries of India on which depend all other industries.

This brings us naturally to the question of nationalisation of mines. I am a mining man out and out and I have gone through this matter not only as an Engineer – but also as a businessman and as a man who has faith in the exalted destiny of

India. In this view of immediate and complete nationalisations of all mines including coal mines – I am supported by no less an authority as late Sri H. K. Nag who was one of the foremost Geologist and Mining Engineer and who served in almost all the Government sponsored Committees on all mining matters as the only Indian member and who was himself a colliery proprietor and a coal-prince. The coal mines should be nationalised for the following reasons – otherwise a huge and most important national wealth is being either wasted or utilised for the benefit of only a few.

(1) It will make preservation of metallurgy coal possible and immediately effective. For the numerous collieries producing metallurgical coal want their own profits and they will not keep their mines idle – there being no demand for metallurgical purposes all that they can produce and supply, as such vast quantities of this most useful coal is being wasted.

(2) Fragmentation of coal lands among different colliery proprietors is causing a great loss of coal in the shape of barriers and wasteful methods of working.

(3) The capital costs for mining of coal in uneconomic plot has been enormous and they are being incurred uselessly and to the detriment of capital involved and the higher cost of raising coal which has been very high in comparison with what it pays to the actual coal cutter.

(4) Loss of coal due to fire – inundation can be reduced to a minimum if not totally eliminated.

(5) The reduced cost of mining will help to raise the status of the labour.

(6) The owner of the surface land could be better compensated for loss of their ancestral land and households.

In England mining have been the first industry to be nationalised. With them this might have been a socialistic fad. But with India it is a national need and it will be an act of sheer patriotism which should prompt the national Government to take this step immediately and without a moments delay and I would say – even before the road transport is nationalised. The colliery proprietors should as real patriots voluntarily submit to this national necessity and urge upon the Government the immediate and urgent need of this step.

Regarding method of mining in India I am sorry to remark here that it is far from satisfactory. Most of the smaller mines which are often under-financed are working in the most primitive way – their only motive being any how to earn and amass money at the cost of the labourers and the country's future welfare. Though Great Britain is one of the pioneers in coal mining – yet an eminent Geologist of Dr. Cyril Fox's calibre who had acquired knowledge of mining in all the collieries of the world remarked that Soviet Russia has attained the first place in this respect. The Russians have made record output of coal through a single raising pit –

so perfect and scientific and efficient are their arrangements both underground and at the pit mouth at the surface.

Regarding the present output of coal India is not only self-sufficient but is also in a position to export coal though at one time the South African coal was a menace in its own home market. But that menace is removed and let us hope it is removed once and for all time to come.

Though India is lucky in having her own requirements of coal – yet her requirements of other mineral and mineral products like iron, steel, alluminium, copper and their alloys – so vitally necessary for her own existence and for the extensive expansion of her industries can hardly be met by her own output. Yet she has all the raw materials – like iron ore, copper ore, bauxite for alluminium and also her gold, silver and lead mines. Besides her immense quantities of known deposits – the possibilities of the yet undiscovered mineral wealth are such as will sustain her through thousands of years without depending on any outside Agency. It will require great vision and still greater courage – determination and grit to unearth from the bosom of mother earth the unlimited hidden wealth kept concealed there for her sons. It will require not only Government help and support – but there must be enlightened leadership and enterprising and patriotic capital to utilise and deserve such national support and subsidy.

I have attached herewith a table showing the output of some of the minerals.

APPENDIX

Name of Mineral or Mineral Products:	Present Output		India's Requirements.		Remarks.
Copper	6,500	Tons.	40,000	Tons.	
Aluminium	4,000	,,	15,000	,,	
Gold	3,00,000	,,			
Iron	14,00,000	,,			
Manganese	10,00,000	,,		...	Almost the whole quantity is exported.
Asbestos	500	,,	30,000	,,	This included finished asbestos good.
Limestone	60,00,000	,,			
Mica	2,00,000	Cwt.		...	India supplies 80 percent of World requirements.
Petrol	8,00,00,000	gallons.	35,00,000 i. e. 800,00,00,000	,, galns.	
Zinc	1,000	Tons.	25,000	Tons.	
Lead	500	,,	7,500	,,	
Magnesiun	30,000	,,			
Coal	3,00,00,000	,,			
Chromite	50,000	,,		...	About forty thousand tons are exported.

I have not encumbered this article with full facts and figures. Nor have I mentioned of any technical matters. They can be had from any books of statistics printed by the Government each year or from technical books on the subjects. I also do not like to bore you with the details of mining operations which only interest the experts and technicians. What we, the millions of common citizens of this sacred land of ours, are concerned are that we all must know what we and our land possess and what the state is doing and ought to do in exploiting the mineral wealth for the cause of the nation as a whole I also give the following informations of vital interest :-

(1) What mineral wealth India possesses in sufficient quantity and what we produce in sufficient quantity to meet not only our present need but also our evergrowing Industries. They are coal, fire-clay, limestone, china clay, manganese, mica, ochres etc.

(2) What mineral wealth we possess in plenty – but what we do not produce in sufficient quantity as finished products to meet our present need even – not to speak of our future and ever growing requirements – Iron, Steel, copper, gold, silver, Aluminium, lead, asbestos etc.

(3) What mineral wealth we possess but not in sufficient quantity and for which we are partially and dangerously dependent on

other countries. They are petrol, gypsum platinum etc.

(4) What mineral wealth we do not possess for the time being – Tin.

But mineral wealth of metals and of matter is not the only wealth which a nation possess. It is the duty of a citizen of the State and head of the State to find out and make discoveries of mines of human talents – which are thousand times more valuable and million times more powerful a factor for the regeneration of a country so vast like India than the mines of base ores. I shall cite only one example in this connection which will be sufficient to illustrate my point.

It was in Russia of the Tsars that a man took it into his head to find out why oranges and other fruit trees could not be grown in the unlimited stretches of the wastes of Siberia where only shrubery grew. He took a plot of land on lease and was immersed in years of deep researches – without knowing what was happening in the world outside. As usual here in India – and so also in Russia too the tax collectors of the Tsar found that this man was in arrears of taxes – so every effort was made to realise the tax from him. This man having no fund was unable to pay taxes. As such the whole machinery of the state was set in full motion against him to realise arrear of taxes and eject this man from this plot of land of Siberia where thousands of square miles of land remained fallow and uncultivated and no tax accured from them. Yet this man

with a little plot of land must be ousted. Such were the ways of the heartless, brainless, and soulless State which then ruled over the destinies of millions of Russia – the biggest nation on earth in points of its land area. But God is great and is ever so great in every land and in every clime. He can set the whole earth, nay, the whole universe in motion for the sake of an unright cause. He can set ablaze a whole continent if He found a righteous creation of His is being persecuted. So the immutable laws of God started working and was set in motion. The steam roller of destiny moved this time not slowly but with the speed of lightning. The Russian revolution of 1917 came. The houses of the Romanoffs (Tsars) were destroyed. Lenin headed the state. A faint rumour came to Lenin's ears that a man was deeply engaged in a 'tapasya' or deep researches, which, if successful, would make Russia enormously rich in wealth and food as a self sufficient country in the production of oranges. Not only that she would be able ultimately to supply the whole market of the world with oranges. The Russian revolution had just been completed. The land was too vast and the whole population was too agitated. The spectre of counter revolution was still haunting the land for any diversion of attention for anything. Everything was in a melting pot. Yet Lenin the head of such a states of the whole of Russia in the midst of such perplexing circumstances made time personally to go and find out and meet this man just to tell him that his land was free of all taxes and the whole resources of the state was at his back. That was why Russia could cover hundreds of years of backwardness in a score of

years. The man succeeded in grafting the orange trees with the roots of the shrubbery and oranges have been growing in the snowy wastes of Siberia.

Here in India there is no dearth of such man. But there are several perhaps hundred and thousands. But like Gem of purest ray serene they are pining in poverty. Their talents wither in the desert air. But the worst tragedy is that many of the most valuable mines of human talents which could manage to come to the surface of its own power and inherent strength to be exploited and utilised for the best interest of the nation are being smothered in a way which can have parallel only in the state of the autocratic Tsars. It is no doubt a bad day for the State when it flouts talents. It is a bad day for those in power. They forget God. They forget the divinity of man. In any case we engineers and scientists – we who are born constructive and creative workers – we must not be dismayed by such apparently insurmountable difficulties and set-backs. As I find that my friend Sri Naidu is standing here like a towering rock of real Truth and Non-violence against the onrush of apparently formidable and surging currents of corruption which is deluging the whole land. But believe as I do in a just God and in an almighty and all powerful God – I assure Sri Naidu and one and all that the foaming and frothing currents which look so formidable now will pass over and the sources of this seemingly powerful and uncontrolable current of corruption will be dried up at its source and the cause of justice and righteous will triumph. The rock will remain standing to the eternal glory of

God. As a mining man it is our principle to rush on as soon as we make a new find and new discovery of mine. As a man – who believes in God it is my duty to rush in when there is a new find of talents in humanity. For in such talents we can discern the unfolding of the power of God. I believe not in creations only. It is the creations which irressistibly draws me to the creator. We can fail to be impressed by the infinite varieties of plant life on Earth and the different variety of their designs to serve the same purposes of standing the stress and strains of storms that often blow so violently and mercilessly over them. Compare a cocoanut tree with a Banyan tree. How quite differently they are designed? Look at the varieties of creatures living in water? All their organs are so differently designed and their varieties are infinite. Compare a crocodile with a tiny fish. How they inhale in water with a organs so differently designed? How they preserve themselves in water? Look at the infinite varieties of colours in flower the biggest one in the hills and forests and the most tiny ones in the grass. All these naturally draw us to their Creator – God. So also when there is creative work in this world and in the field of physical, chemical or medical sciences or in the field of applied sciences like engineering we know that God is revealing Himself in a small way through one of his Agent the man on Earth. That is how I look upon the inventors. That is the spirit which has acted as a compelling force to bring us here to-day. So when I talk of the mineral wealth of India – I not only mean all those semi-previous and precious metals which go to make a country materialy wealthy and

happy – but I am more concerned with all that mines of human talents and genius which when properly utilised can make a nation really Great.

Russia has her Urals. India has her Himalayas. The dream of exploitation of the unknown and vast mineral wealth of Ural mountains tempted the German Fuhrer to attack Russia. But Russians themselves utilised those mineral resources and beat back their enemies. India's Himalayas – which stretches from Kashmir to Darjeeling is several times bigger than Urals. The mineral potentiality of the Himalayas is great. Uptil now India has no platinum mine. But there is possibility of such mines in the Himalayas. Uranium mines may also be discovered in the Himalayan region. Our ancient sages attained the highest pinacles of spiritual power in the peaks and caves of Himalayas. But while engaged in the quest of the highest Truth – many of them had gathered knowledge of presences of valuable stones and minerals hidden in the inaccessible parts of the Himalayas. They incorporated these facts and their knowledge of existence of mineral wealth like Gold and Silver in many Sanskrit books – which may be found in the Sanskrit Library of Germany. Time has now come for us to collect as many of those books as possible and set about the task of the complete survey and exploration of the unexplored regions of India and the Himalayas and to map out all the sources of various kinds of minerals. While vast quantities of natural cement have been discovered above Lucknow areas – the latest news come from Nepal where one of the biggest, best and richest iron ore deposit has been

discovered. A huge lignite coal deposit has been discovered at Neivelly - Oomangalam in South Arcot District and my friend Sri H. K. Ghose is in charge of the investigation of the same.

If India must maintain her independence and her sons must reap the benefit of independence - she must, act quickly and vigorously in developing her inexhaustible mineral wealth. She must utilise all her available man power and the best brains for the full utilisation of her mineral wealth for utllisation in the ever expanding industries of the country and thus to make her financially sound and strong and economically independent. She must not enslave her again by running with the begging bowl to the World Bank or any outside Agency for loan and thus voluntarily put on the iron chain of slavery however thickly and glitteringly it may be coated with gold colour. She must not lose her freedom which she has won at the cost of the lives of millions of men - but mostly women and children who perished, as the price of freedom, in the holocust of Panjab and Bengal.

India - the possessor of so much natural wealth in men of high talents and courage who are capable of the highest sacrifices for the cause of the nation, India - the master of such a vast amount of natural wealth of every kind of minerals should never and under no circumstances consent to be a borrower nation. If she will take care to receive her moral, material and spiritual strength from the 350 millions of her sons and make the best use of all available talents and resources - she will be in a

position to lend assistance to other nations – after fulfilling all the requirements of her poor, starving and naked sons and daughters. All the wealth of the nation including the most valuable mineral wealth belong to them as a matter of right for they are the sons of the soil and only in their real happiness depends the true and lasting happiness of the Nation.

This is a paper read at the time of the awarding Prizes and Certificates to the Refresher Course Students who underwent training under the auspices of the Industrial Labour Welfare Association Limited on 9th August 1949.

Printed at the
U. M. S. Power Press,
Coimbatore.